

PETER WATTS

THE COLONEL



The Colonel

PETER WATTS

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TOR·COM 

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Contents

[Title Page](#)
[Copyright Notice](#)
[Begin Reading](#)

The insurgents are already vectoring in from the east when the flag goes up. By the time the Colonel's back in the game—processed the intel, found a vantage point, grabbed the nearest network specialist out of bed and plunked her down at the board—they've got the compound surrounded. Rainforest hides them from baseline vision but the Colonel's borrowed eyes see well into the infrared. From half a world away, he tracks each fuzzy heatprint filtering up through the impoverished canopy.

One of the few good things about the decimation of Ecuador's wildlife: not much chance, these days, of mistaking a guerrilla for a jaguar.

"I make thirteen," the Lieutenant says, tallying blobs of false color on the display.

A welter of tanks and towers in the middle of a clear-cut. A massive umbilical, studded with paired lifting surfaces along its length, sags gently into the sky from the pump station at its heart. Eight kilometers further west—and twenty more, straight up—an aerostat wallows at the end of the line like a great bloated tick, vomiting sulfates into the stratosphere.

There's a fence around the compound of course, old-fashioned chain-link with razorwire frosting, not so much a barrier as a nostalgic reminder of simpler times. There's a ring of scorched earth ten meters wide between fence and forest, another eighty from fence to factory. There are defenses guarding the perimeter.

"Can we access the on-site security?" He tried—unsuccessfully—before the Lieutenant arrived, but she's the specialist.

She shakes her head. "It's self-contained. No fiber in, no phone to answer. Doesn't even transmit unless it's already under attack. Only way to access the code is to actually go out there. Pretty much hack-proof."

So they're stuck looking down from geostat. "Can you show me the ranges at least? Ground measures only."

"Sure. That's just blueprint stuff." A schematic blooms across the Lieutenant's board, scaled and overlaid onto the real time. Translucent lemon pie-slices fan out from various points around the edge of the facility, an overlapping hot zone extending to the fence and a little beyond. The guns are all pointed out, though. Anybody who makes it to the hole in the donut is home free.

The heatprints enter the clearing; the Lieutenant collapses the palette down to visible light.

“Huh,” the Colonel says.

The insurgents have not stepped into view. They didn’t walk or run. They’re—*scuttling*, for want of a better word. Crawling. Squirming arrhythmically. They remind the Colonel of crabs afflicted with some kind of neurological disorder, flipped onto their backs and trying to right themselves. Each pushes a small bedroll along the ground.

“What the fuck,” the Lieutenant murmurs.

The insurgents are slathered head-to-toe in some kind of brownish paste. Mud idols in cargo shorts. Two pairs have linked up like wrestling sloths, like conjoined twins fused gut-to-back. They lurch and roll to the foot of the fence.

The station’s defenses are not firing.

Not bedrolls: *mats*, roughly woven, natural fiber from the look of it. The insurgents unroll them at the fence, throw them up over the razorwire to ensure safe passage during the climb.

The Lieutenant glances up. “They networked yet?”

“Can’t be. It’d trip the alarms.”

“Why haven’t they tripped the alarms already? They’re *right there*.” She frowns. “Maybe they disabled security somehow.”

The insurgents are inside the perimeter.

“Your hack-proof security?” The Colonel shakes his head. “No, if they’d taken out the guns they’d just—*shit*.”

“What?”

Insulative mud, judiciously applied to reshape the thermal profile. No hardware, no alloys or synthetics to give the game away. Interlocked bodies, contortionist poses: how would those shapes profile at ground level? What would the security cameras see, looking out across—

“Wildlife. *They’re impersonating wildlife*.” *Jaguars and guerillas, my ass...*

“What?”

“It’s a legacy loophole, don’t you—” But of course she doesn’t. Too young to remember Ecuador’s once-proud tradition of protecting its charismatic megafauna. Not even born when that herd of peccaries and Greenpeace got mowed down by an overeager pillbox programmed to defend the local airstrip. Wouldn’t know about the safeguards since legislated into every automated targeting system in the country, long-since forgotten for want of any wildlife left to protect.

So much for on-site security. The insurgents will be smart enough to

hold off on coalescing until they're beyond any local firing solution. "How long before the drones arrive?"

The Lieutenant dips into her own head, checks a feed. "Seventeen minutes."

"We have to assume they'll have completed their mission before then."

"Yes sir, but—*what* mission? What are they gonna do, scratch the paint with their fingernails?"

He doesn't know. His source didn't know. The insurgents themselves probably don't know, won't know until they network; you could snatch one off the ground this very instant, read the voxels right off her brain, get no joy at all.

That's the scary thing about hive minds. Their plans are too big to fit into any one piece.

He shakes his head. "So we can't access the guns. What about normal station operations?"

"Sure. Stations have to talk to each other to keep the injection rates balanced."

The insurgents are halfway to the scrubbers. It's astonishing that such quick headway could emerge from such graceless convulsion.

"Get us in."

A wave of stars ignites across the schematic, right to left: switches, valves, a myriad of interfaces coming online. The Colonel points to a cluster of sparks in the southwest quadrant. "Can we vent those tanks?"

"Not happily." She frowns. "A free dump would be catastrophic. Only way the system would go along with that is if it thought it was preventing something even worse."

"Such as?"

"Tank explosion, I guess."

"Set it up."

She starts whispering sweet nothings to distant gatekeepers, but she doesn't look pleased. "Sir, isn't this technically—I mean, use of poison gas —"

"Sulfate precursor. Geoengineering stockpile. Not a weapon of war." Technically.

"Yes sir," she says unhappily.

"Countermeasures have to be in place *before* they link up, Lieutenant. If there's any exploit—any at all—the hive will see it. There's no way to outthink the damn thing once it's engaged."

“Yes sir. Ready.”

“That was fast.”

“You said it had to be, sir.” She extends a finger toward a fresh crimson icon pulsing on the board. “Should I—”

“Not yet.” The Colonel stares down from vicarious orbit, tries to make sense of the tableaux. What the hell are they doing? What can even a hive mind accomplish with reed mats and a few kilograms of mu—

Wait a second...

He picks an intruder at random, zooms in. The mud sheathing that body has an almost golden glint to it, now that he looks closely. Something not-quite-mineral, something—

He calls up an archive, searches the microbial index for any weaponized synthetics that might eat heterocyclics. Scores.

“They’re going after the umbilical.”

The Lieutenant glances up. “Sir?”

“The mud. It’s not just a disguise it’s a *payload*, it’s—”

“A biopaste.” The Lieutenant whistles, returns her attention to the board with renewed focus.

The Colonel tries to think. They’re not just aiming to cut the aerostat loose; you don’t need a hive for that, you don’t even need to breach the perimeter. Whatever this is, it’s microsurgical. Something that requires massive on-site computation—maybe something to do with microclimate, something that can be influenced by wind or humidity or any of a dozen other chaotic variables. If they’re not trying to cut the umbilical outright they might be trying to *maneuver* it somehow: a biocorroded hole exactly X millimeters in diameter here, a stretching patch of candle-wax monomers over there, and way up in the stratosphere the aerostat sways some precise number of meters on some precise bearing—

To what end? Play bumper-cars with the maintenance drones? Block some orbital line-of-sight, nudge a distant act of ground-based terrorism into surveillance eclipse at a critical moment? Maybe they’re not going for the umbilical after all, maybe they’re—

“Sir?” The first of the insurgents has made it to the donut hole. “Sir, if we have to light ‘em up before they coalesce—”

“Not yet, Lieutenant.”

He’s a blind man in a bright room. He’s a rhesus monkey playing chess with a grand master. He has no idea of his opponent’s strategy. He has no concept even of the rules of the game. He only knows he’s bound to lose.

The last of the insurgents lurches out of weapons range. The Lieutenant's finger hovers over that icon as though desperate to scratch a maddening itch.

Coalescence.

That far-focus moment, that thousand-soul stare. You can see it in their eyes if you know what to look for, if you're close enough and fast enough. The Colonel is neither. All he has is a top-down view through a telescope thirty-six thousand kilometers away, ricocheted through the atmosphere and spread across this table. But he can see what follows: the fusion of interlocking pieces, the simultaneous change in physical posture, the instant evolutionary leap from spastic quadruped to sapient superweapon.

Out of many, one.

"Now."

It knows. Of course it knows. It's inconceivable that this vast emergent mind hasn't—in the very instant of its awakening—detected some vital clue, made some inference to lay the whole trap bare. The station's defenses whine belatedly into gear, startled awake in the sudden glare of a million thoughts; multimind networks may be invisible to human eyes but they're bright blinding tapestries down in RF. The hive, safely behind the firing line, has no need to care about *that*.

No, what's got its attention now is the wave of hydrogen sulfide billowing from the southern storage tanks: silent, invisible, heavy as a blanket and certain death to any standalone soul. No baseline would suspect a thing until the faint smell of rotten eggs told him he was already dead.

But this soul does not stand alone. Eleven of its bodies simultaneously turn and flee back toward the fence, each following a unique trajectory with a little Brownian randomness layered in to throw off the tracking algos. The other two stand fast in the donut hole, draw sidearms from belts—

The Colonel frowns. *Why didn't the sensors pick those up?*

"Hey, are those guns—that looks like *bone*," the Lieutenant says.

The nodes open fire.

It *is* bone. Something like it anyway; metal or plastic would have triggered the sensors before they'd even reached the fence. The slugs are probably ceramic, though; no osteo derivative would be able to punch through the least of those conduits...

Except that's not what the hive is going for. They're shooting at any old pipe or panel, anything metal, anything that might—

Strike a spark...

Because hydrogen sulfide isn't just poisonous, you idiot. It's flammable.

"Holy shit," the Lieutenant whispers as the zone goes up.

* * *

It's a counter-countermeasure, improvised on the fly. It's a queen sacrifice; some of these bodies are doomed but maybe the fire will burn off enough gas to give the rest a chance, suck back and consume enough of that spreading poison for eleven bodies to make it to safety while two burn like living torches.

For a few seconds the Colonel thinks it's going to work. As Hail-Marys go it's a good one; no baseline would have even come up with a plan in that split-second, much less put it into action. But faint hope is only a little better than none, and not even demigods can change the laws of physics. The sacrificial nodes blaze and blacken and crumble like dead leaves. Three others make it halfway up the chain-link before the gas reaches them, still thick enough to kill if not to burn. The rest die convulsing in the dirt, flesh oiled and guttering with spotty candlelight, jerking with the impact of bullets that can finally kick at targets once they're down.

The poisonous carpet spreads invisibly into the jungle, off to kill whatever weedy life it might still find there.

The Lieutenant swallows, face pale with nausea and the unleashed memories of ancient war crimes. "We're sure this isn't against the—" she trails off, unwilling to challenge a superior officer, unconvinced by legalistic hairsplitting, unable to assess the threat posed by this vanquished enemy.

But the threat is so very real. These things are fucking dangerous. If not for some happenstance bit of intel—unpredictable as a quantum flutter, never to be repeated—this hive would have accomplished its goal without discovery or opposition. Or maybe it did; maybe everything that's just happened was part of the plan, maybe that lucky tip-off was deliberately crafted to make him dance on command. Maybe this was a defeat and he'll never know.

That's the thing about hives. Always ten steps ahead. The fact that there are still jurisdictions where such abominations remain legal scares the Colonel more than he can say.

"Why are we doing this, sir?"

He scowls. "Doing what, exactly? Fighting for the survival of the individual?"

But the Lieutenant shakes her head. “Why are we still just—*fighting* all the time? Among ourselves? I mean, weren’t the aliens supposed to make us all forget our petty differences? Unite humanity against the common threat?”

The ranks are full of them, these days.

“They didn’t threaten us, Lieutenant. They only took our picture.” That’s what everyone assumes, anyway. Sixty-four thousand objects of unknown origin, simultaneously igniting in a precise incandescent grid encircling the globe. Screaming back into space along half the EM spectrum as the atmosphere burned them to ash.

“But they’re still out there. Whatever sent them is, anyway. Even after thirteen years—”

Fourteen. The Colonel feels muscles tighten at the corners of his mouth. *But who’s counting.*

“And with *Theseus* lost—”

“There’s no evidence *Theseus* is lost,” he says shortly.

“Yes, sir.”

“Nobody said it was going to be a weekend mission.”

“Yes sir.” She returns her attention to the board, but he thinks there was something in her face as she turned away. He wonders if it might have been recognition.

Unlikely. It was a long time ago. And he always kept behind the scenes.

“Well—” he heads for the door. “Might as well send in the clowns.”

“Sir?”

He stops but doesn’t turn.

“I was wondering—if it isn’t above my pay grade, sir—but you seemed *really* concerned about what that hive would do when it booted. No way we could keep up when it was engaged, you said.”

“I’m waiting for a question, Lieutenant.”

“Why did we wait? We could’ve gassed the lot of them before they ever linked up, and if they *were* that dangerous—well, it seems like bad strategy.”

He can’t disagree. Which is not to say it was unwarranted.

“Hives are dangerous, Lieutenant. Never doubt that for an instant. That said...”

He considers, and settles for something like the truth.

“If killing’s the only option, I’d rather kill one than thirteen.”

Some threats lurk closer to home. Some are somewhat less—overt.

Take the woman on the feed, for example: a tiny thing, maybe 160 cm. Nothing about Liana Lutterodt suggests anything other than contagious enthusiasm for a world of wonders. No hint of the agency that pays her expenses, sends her on these goodwill tours to dispense rainbows and a promise of Utopia.

No hint of forces deep in the Oregon desert, using her as a sock puppet.

“We climbed this hill,” she says now, to the attentive host of *In Conversation*. “Each step up we could see farther, so of course we kept going. Now we’re at the top. Science has been at the top for a few centuries now.”

Her background’s unremarkable, for the most part: born in Ghana, raised in the UKapelago, top of her class in systems theory and theistic virology.

“Now we look out across the plain and we see this other tribe dancing around above the clouds, even higher than we are. Maybe it’s a mirage, maybe it’s a trick. Or maybe they just climbed a higher peak we can’t see because the clouds are blocking the view.”

Little in the way of overt criminal activity. Charged with possession of a private database at thirteen, interfering with domestic surveillance pickups at twelve. The usual fines and warnings racked up by the young before they learn to embrace the panopticon.

“So we head off to find out—but every step takes us *downhill*. No matter what direction we go, we can’t move off our peak without losing our vantage point. Naturally we climb back up again. We’re trapped on a local maximum.”

Finally managed to drop off the grid legally by signing up with the Bicameral Order, which gets special exemption by virtue of being largely incomprehensible even when you *do* keep an eye on them.

“But what if there *is* a higher peak out there, way across the plain? The only way to get there is bite the bullet, come down off our foothill and trudge along the riverbed until we finally start going uphill again. And it’s only then you realize: Hey, this mountain reaches *way* higher than that foothill we were on before, and we can see so much better from up here.”

The Bicamerals. Named, apparently, for some prototype of reinvention that involved massive rewiring of their cerebral hemispheres. The name’s a coelacanth these days, though. It’s not even certain the Bicams *have* cerebral hemispheres any more.

“But you can’t get there unless you leave behind all the tools that made you so successful in the first place. You have to take that first step downhill.”

“You buy any of this?” The Lieutenant (a different Lieutenant—the Colonel has one in every port) glances away from the screen, lip pulled sideways in a skeptical grimace. “Faith-based science?”

“It’s not science,” the Colonel says. “They don’t pretend that it is.”

“Even worse. You don’t build a better brainchip by speaking in tongues.”

“Hard to argue with the patents.”

It’s the patents that have him worried. The Bicamerals don’t seem to have any martial ambitions, no designs of conquest—don’t seem especially interested in the outside world at all, for that matter. So far they’ve been content to hunker down in their scattered desert monasteries, contemplating whatever reality underlies reality.

But there are other ways to throw the world on its side. Things are—fragile, these days. Whole societies have been known to fall in the wake of a single paradigm shift, and the Bicamerals own half the patent office. They could make the global economy eat itself overnight if they wanted to. It wouldn’t even be illegal.

Lutterodt isn’t actually part of that hive, as far as anyone can tell. She just fronts for it; a friendly face, a charismatic spokesperson to grease wheels and calm fears. She’s out in the world for the next couple of weeks, doing the rounds: a fellow standalone human being, with access to the deepest Bicameral secrets. Completely at home in a world where a thought doesn’t know enough to stop at the edge of the skull, doesn’t even know when it’s left one head and entered another.

“You want to bring her in?” the Lieutenant asks as Lutterodt disarms the world with a smile and a pocketful of metaphors.

He has to admit it’s tempting: cut her off from the herd, draw the curtain of Global Security across the interrogation. Who knows what insights she might share, given the right incentive?

He shakes his head. “I’ll go to her.”

“Really?” Evidently not what this new Lieutenant signed up for, setting forth on bended knee.

“She’s on a goodwill tour. Let’s give her a chance to spread some good will.”

It’s not as generous as it seems, of course. You never want to strong-

arm an adversary until you know how hard they can push back.

* * *

This global survey, this threat-assessment of hived minds: it's not his only assignment. It's only his most recent. A dozen others idle in the background, only occasionally warranting examination or update. Realist incursions into the UKapelago; a newly-separatist Baptist Convention, building their armed gyland on the high seas. The occasional court-martial of some antique flesh-and-blood infantry whose cybernetic augments violate the Rules of Engagement. They all sit in his queue, pilot-lit, half-forgotten. They'll flag him if they need his attention.

But there's one candle the Colonel has never forgotten, though it hasn't flickered for the better part of a decade. It, too, is programmed to call out in the event of any change in status. He checks it anyway, daily. Now—back for a couple of days in the large empty apartment he kept even after his wife went to Heaven—he checks it again.

No change.

He puts his inlays to sleep, takes grateful refuge in the silence that fills his head once the overlays and the status reports stop murmuring through his temporal lobe. He grows belatedly aware of a *real* sensation, the soft tick of claws on the tiles behind him. He turns and glimpses a small furry black-and-white face before it ducks out of sight around the corner.

The Colonel adjourns to the kitchen.

Zephyr's willing to let the apartment feed him—he pretty much has to be, given the intermittent availability of his human servant—but he doesn't like it much. He refused outright at first, rendered psychotic by some cross-species dabbler who must have thought it would be *enlightening* or *transcendent* or just plain *cute* to “share consciousness” with a small soul weighing in at one-tenth the synapse count. The Colonel tries to imagine what that kind of forced fusion must have been like: thrust into a maelstrom of incomprehensible thought and sensation, blinding as a naked sun; thrown back into stunned bleeding darkness once some narcissistic god got bored and cut the connection.

Zephyr hid in the closet for weeks after the Colonel brought him home, hissed and spat at the sight of sockets and fiberop and the low-slung housecleaner trundling quietly on its rounds. After two years his furry little brain has at least rejiggered the cost/benefit stats for the kibble dispenser in the kitchen but he's still more phantom than fur, still mostly visible only from the corner of the eye. He can be coaxed into the open if he's hungry

and if the Colonel is very still; he still recoils at physical contact. The Colonel indulges him, and pretends not to notice the ragged fraying of the armrest on the living room couch. He doesn't even have the heart to get the socket removed from the patch of twisted scar tissue on Zephyr's head. No telling what post-traumatic nightmares might be reawakened by a trip to the vet.

Now he fills the kibble bowl and stands back the requisite two meters. (This is progress; just six months ago he could never stray closer than three.) Zephyr creeps into the kitchen, nose twitching, eyes darting to every corner.

The Colonel hopes that whoever inflicted that torment went on to try more exotic interfaces once they got bored with mammals. A cephalopod, perhaps. By all accounts, things get a lot less cuddly when you go B2B with a Pacific octopus.

At least Human hives can lay claim to mutual consent. At least its members *choose* the violence they inflict on themselves, the emergence of some voluntary monster from the pool of all those annihilated identities. If only it stopped there. If only the damage ended where the hive did.

His son's candle slumbers in its own little corner of his network, a pilot light in purgatory. Zephyr glances around with every second bite, still fearful of some Second Coming.

The Colonel knows how he feels.

* * *

They meet on a patio off Riverside: one of those heritage bistros where everything from food prep to table service is performed by flesh-and-blood, and where everything from food prep to table service suffers as a result. People seem willing to pay extra for the personal touch anyway.

"You disapprove," Dr. Lutterodt says, getting straight to the point.

"Of many things," The Colonel admits. "You'll have to be more specific."

"Of us. What we do." She glances at the menu (literally—it's printed on dumb stock). "Of hives in general, I'm guessing."

"There's a reason they're against the law." Most of them, anyway.

"There is: because people get scared when things they can't understand have control over their lives. Doesn't matter how rational or beneficial any given law or a policy might be. When you need ten brains to understand the nuts and bolts, the unibrains get skittish." The sock puppet shrugs. "The thing is, Bicam hives don't make laws or set policies. They keep their eyes

on nature and their hands to themselves. Maybe that's why they're *not* against the law."

"Or maybe it's just a loophole. If anyone had seen meat interfaces coming down the pike, you can bet we'd have defined *technology* a bit more explicitly."

"Except the Interface Act passed a good ten years ago and they *still* haven't got their definition right. How could they? Brains rewire themselves every time we have an idle thought; how do you outlaw cortical editing without outlawing life at the same time?"

"Not my department."

"Still. You disapprove."

"I've just seen too much damage. You put such a happy face on it, you go on and on about the transcendent insights of the group mind. All the *insight* to be had by joining some greater whole. Nobody talks about—"

What the rest of us pay for your enlightenment—

"—what happens to you afterward."

"A glimpse of heaven," Lutterodt murmurs, "that turns your life to hell."

The Colonel blinks. "Exactly." What must it be like to be given god sight only to have it snatched away again, to have your miserable baseline existence plagued by muddy, incomprehensible half-memories of the sublime? No wonder people get addicted. No wonder some have to be ripped screaming from their sockets.

Ending a life suffered in the shadows of such incandescence—why, that would almost be an act of mercy.

"—a common misconception," Lutterodt is saying. "The hive's not some jigsaw with a thousand little personalities, it's *integrated*. Jim Moore doesn't turn into Superman; Jim Moore doesn't even *exist* when the hive's active. Not unless you've got your latency dialed way down, anyway."

"Even worse."

She shakes her head, a little impatiently. "If it was bad thing you'd already know it first-hand. *You're* a hive mind. You always have been."

"If that's your perspective on the Chain of Command—"

"*Everyone's* a hive."

He snorts.

She presses on: "You've got two cerebral hemispheres, right? Each one fully capable of running its own standalone persona, running *multiple* personae in fact. If I were to put one of those hemispheres down for the

count, anesthetize it or scramble it with enough TMS, the other would carry on just fine, and you know what? *It would be different than you.* It might have different political beliefs, a different gender—hell, it might even have a sense of humor. Right up until the other hemisphere woke up, and fused, and became *you* again.

“So tell me, Colonel; are your hemispheres suffering right now? Are there multiple selves in your head, bound and gagged, thinking *Oh Great Ganesh I’m trapped! If only the Hive would let me out to play!*”

I don’t know, he realizes. *How could I know?*

“Course not,” Lutterodt answers herself. “It’s just timesharing. Completely transparent.”

“And Post-Coalescent Psychosis is just an urban legend spread by the tinfoil brigade.”

She sighs. “No, PCP is very real. And it is tragic, and it fucks up thousands of lives. Yes. And it is entirely a result of defective interface technology. Our guys don’t get it.”

“Not everyone’s so lucky,” the Colonel says.

A man with cosmetic chlorophyll in his eyes arrives, bearing their orders. Lutterodt gives him a smile and digs into a cloned crab salad. The Colonel picks through bits of avocado he barely remembers ordering. “Have you ever visited the Moksha Mind?”

“Only in virt.”

“You know you can’t trust anything you experience in virt.”

“You can’t trust anything you experience at this *table*. Do you see that big honking blind spot in the middle of your visual field?”

“I’m not talking about nature’s shortcuts. I’m talking about something with an agenda.”

“Okay.” She chews, speaks around a mouthful. “So what’s the Moksha agenda?”

“Nobody knows. Eight million human minds linked together, and they just—lie there. Sure, you’ve seen the feeds from Bangalore and Hyderabad, the nice clean dorms with the smart beds to exercise the bodies and keep everything supple. Have you seen the nodes living at the ass end of five hundred kilometers of dirt track? People with nothing more than a cot and a hut and a C-square router by the village well?”

She doesn’t answer.

He takes it for a *no*. “You should pay them a visit sometime. Some of them have people checking in on them. Some—don’t. I’ve seen children

covered with stinking bedsores lying in their own shit, people with half their teeth fallen out because they're wired into that hive. And they *don't care*. They *can't* care, because there is no *them* any more, and the hive doesn't give a rat's ass about the pieces it's built out of any more than—"

Human torches, blazing in the Ecuadorian rainforest.

"—any more than you'd care about a single cell in your liver."

Lutterodt glances down at her drink. "It's what they aspire to, Colonel. Freedom from saṃsāra. I can't pretend it's a choice I'd make for myself." She looks back up, catches his gaze, holds it. "But that's not what's bothering you."

"Why do you say that?"

"Because no matter how much you disapprove of their lifestyle, eight million happily-catatonic souls aren't any kind of military threat."

"You sure about that? Can you even begin to imagine what kind of plans could be brewing in a coherent thinking entity with the mass of eight million human brains?"

"World conquest." Lutterodt nods, deadpan. "Because that's what the Dharmic faiths are all about."

He doesn't laugh. "*People* subscribe to a faith. That hive is something else entirely."

"And if they're a threat," she says quietly, "what are we?"

Her masters, she means. And the answer is, *Terrifying*.

"Moksha's not so radical when you get right down to it," she continues. "It's built out of garden-variety brains after all. *My* guys played around with the cortical architecture. We've got entanglement on the brain, we've got quantum bioradio grown on principles you won't stumble across for another twenty years. You can't even define it as *technology* any more. That's why you and I are talking right now, isn't it? Because if a bunch of networked baselines has you worried, how could the Bicamerals *not* be a threat?"

"Are they?" he asks at last.

She snorts. "Look, you can optimize a brain for *down there* or *up here*. Not both. Bicams think at Planck scales. All that quantum craziness is as intuitive to them as the trajectory of a baseball is to you. But you know what?"

He's heard it before: "They don't get baseballs."

"They don't get baseballs. Oh, they get around okay. They can wipe their asses and feed themselves. But stick 'em in a big city and—well,

saying it would make them *uncomfortable* is putting it mildly.”

He doesn’t buy it.

“Why do you think they need people like me? You think they set up way out in the desert so they can build some kind of supervillain lair?” Lutterodt rolls her eyes. “They’re no threat, believe me. They’d have a hard time getting across a busy street.”

“Their physical prowess is the last thing I’m worried about. Something that advanced could crush us underfoot and never even notice.”

“Colonel, I *live* with them. They haven’t crushed me yet.”

“We both know how destabilizing it would be if the Bicams marketed even a fraction—”

“But they haven’t, have they? Why would they? You think they care about a fucking profit margin in your fantasy-world *economy*?” Lutterodt shakes her head. “You should be thanking whatever Gods you subscribe to that they *do* hold those patents. Anyone else probably *would* have kicked the anthill over by now, for no more reason than a good fiscal quarterly.”

So we’re ants to you now.

“Whether you admit it or not, your world’s better off with them in it. They keep to themselves, they don’t bother anyone, and when they *do* come out to play you cavemen make out like bandits. You should know that already; the Armed Forces have been licensing our cryption tech for over a decade.”

“Not lately we haven’t.” Not since someone up the chain got antsy about back doors. Although perhaps the Colonel had something to do with that decision as well.

“Your loss. Just a couple months back Coahuila came up with a Ramanujan-symmetric variant you guys would kill for. Nothing lays a hand on our algos.” She reconsiders. “Nothing baseline, anyway.”

“It won’t work, Dr. Lutterodt.”

She raises her eyebrows, the very picture of innocence.

He leans in across the table. “Maybe you really do feel safe, sleeping with your giants. They haven’t rolled over and crushed you in your sleep yet; maybe you think that’s some kind of guarantee they never will. I will never be that reckless—”

Again.

Even after all this time, the qualifier still kicks him in the gut.

“They’re not the enemy, Colonel.”

He takes a breath, marvels at its control. “That’s what scares me. At

least you can hope to understand what an enemy *wants*. That thing—” He shakes his head. “You’ve admitted it yourself. Its ambitions won’t even fit into a human skull.”

“Right now,” Lutterodt says, “it wants to help you.”

“Right.”

She peels off a fingernail and slides it across the table. He looks but doesn’t touch.

“It’s a crystal,” she says after a moment.

“I know what it is. You couldn’t have just sacc’d it to me?”

“You would have accepted it? You would have let a Bicameral stooge dump data directly into your head?”

He concedes the point with a small grimace. “What is it?”

“It’s a transmission. We decrypted it a few weeks ago.”

“A transmission.”

“From the Oort. As far as we can tell.”

She’s lying. She has to be.

The Colonel shakes his head. “We would have—” Every day, for the better part of ten years. Checking the pilot light. Squeezing the microwave background for a word, a whisper, a sigh. Eyes always fixed on the heavens, even now, even after the losses have been tallied and all other eyes have moved on to better prospects.

There’s no evidence Theseus is lost...

“We’ve been scanning ever since the launch. If there’d been any kind of signal I’d know about it.”

Lutterodt shrugs. “They can do things you can’t. Isn’t that what keeps you up at night?”

“They don’t even have an array. Where’d they get the telemetry?”

She smiles the faintest smile.

The light dawns at last. “You—you *knew*...”

Lutterodt reaches across the table and pushes her dismembered fingernail a few centimeters closer. “Take it.”

“You knew I was going to reach out to you. You *planned* on it.”

“See what it says.”

“You know about my *son*.” He feels his breath hissing through teeth suddenly clenched. “You *fuckers*. You’re using my own *son* against me now?”

“I promise you’ll find it worth—”

He stands. “If your masters think they can hold him *hostage*...”

“Hos—” Lutterodt blinks. “Of course not. I told you, they want to *help* —”

“A *hive* wants to help. It was a fucking hive in the *first* place that...”

“Jim. They’re *giving* it to you.” He sees nothing in that face but earnest entreaty. “Take it. Open it wherever, whenever you want. Run it through whatever filters or bomb detectors, whatever security you deem appropriate.”

He eyes it as though it’s sprouted teeth. “You’re giving it to me. No strings attached.

“Just one.”

“Of course.” He shakes his head, disgusted. “And that would be.”

“This is for you, Jim. Not your masters. Not Mission Control.”

“You know I can’t make that promise.”

“Then don’t take the offer. I don’t have to tell you what happens if word gets out. You’re willing to talk to us, at least. Others might not be so reasonable. And despite your deepest fears, we can’t summon lightning from the heavens to strike down our adversaries. You spread this around and there’ll be bots and jackboots stomping through every monastery in WestHem.”

“Why trust me at all? How do you know I won’t authorize an op on the strength of this conversation?”

She counts the ways. “Because you’re not that kind of man. Because maybe I’m lying, and you don’t want to risk lives and assets only to discover we *can* bring down the lightning after all. And because—” She taps the fake fingernail with a real one. “Because what if this *is* from *Theseus*, and you never get another chance?”

“If. You don’t know?”

“*You* don’t,” Lutterodt says, and the temptation pulls so relentlessly at his soul that he barely notices she hasn’t answered the question.

The device sits between them like something coiled.

“Why?” he asks at last.

“They come across things, sometimes,” she tells him. “Spin-offs, you might say. In the course of other pursuits. Things which aren’t necessarily relevant to the Bicams, but which others might find meaningful.”

“Why should they care?”

“But they do, Jim. You think they’re beyond us, you think we can’t possibly understand their motives. It’s an article of faith with you. But here’s a motive staring you in the face and you can’t even see it.”

“*What motive?*” He sees nothing but leg-hold traps, gaping on all sides.

“It’s how you know they’re not gods after all,” she tells him. “They have compassion.”

* * *

They don’t, of course. It’s manipulation, pure and simple. It’s clay being shaped by the potter, it’s a hotwire to centers of longing in the heart of the brain. It’s the pulling of strings that reach all the way into the stratosphere.

Unbreakable ones, apparently.

Zephyr’s claws click furtively in the next room as he opens the cache. There are directories within directories here: files of raw static, fourier transforms, interpretations of signal to noise reduced to least-squares and splines. It all opens instantly and without fuss: no locks, no passwords, no ruby sweep of laser across iris. (He would not have been surprised if there had been. Why couldn’t those giants have reached up from the Planck length to snatch his eyeprints from some quantum-encrypted file?) Maybe none of that’s necessary. Maybe everything’s embedded in some invisible failsafe, some impossible mind-reading algorithm that scans his conscience in an instant, ready to wipe everything clean should he be found guilty of violating the hive’s trust.

Maybe they simply know him better than he does.

He recognizes the faint echo of the microwave background, stamped across the data like a smudged fingerprint from the dawn of time. He sees something like a transponder code in the residuals. He has to take most of the analyses on faith; if any of this *was* sent from *Theseus*, it either passed through some very heavy weather *en route* or the transmitter was damaged. What remains appears to be the remnants of a multichannel braid, its intelligence woven as much into the way its frequencies interact as in the signals themselves. A data hologram.

Finally he extracts a single thread from the tapestry: an arid stream of linear text. The metatags suggest that it was gleaned from some kind of acoustic signal—a voice channel, most likely—but one so faint that the reconstruction isn’t so much filtered from static as built from the stuff. The resulting text is simple and unadorned. Much of it is conjectural.

IMAGINE YOU ARE SIRI KEETON, it begins.

The Colonel’s legs buckle beneath him.

* * *

He used to go to Heaven once a week. Then once a month. Now it’s

been over a year.

There just hasn't seemed to be any point.

It's not a hive, not the sort that falls within his mandate anyway. Heaven's brains are networked but it's all subconscious—interneurons surplus to current needs, rented out for the processing power while their waking souls float on top in dream worlds of their own imagining. It's the ultimate business model: Give us your brain to run our machinery and we'll keep its conscious left-overs entertained.

Helen Keeton is still technically his wife. Annulments are straightforward enough when a spouse ascends, but a few forms don't alter the reality of the situation one way or another and the Colonel never got around to doing the paperwork. She doesn't answer at first, keeps him in Limbo while she finishes whatever virtual pastime he's caught her in the middle of. Or maybe just to make him wait. After a year, he supposes he can't complain.

Finally a jagged-edged cloud of rainbows descends into his presence, the shattered fragments of a stained-glass window. Its shards swirl and dance like schooling fish: some nearest-neighbor flocking algo that conjures arabesques out of chaos. The Colonel still doesn't know whether it's deliberate affectation or just some off-the-shelf avatar.

It's always struck him as a little over-the-top.

A voice from swirling glass: "Jim..."

She sounds distant, distracted. As disjointed as her own manifestation. Fourteen years in a world where the very laws of physics root in dreams and wish-fulfillment: he's probably lucky she can speak at all.

"I thought you should know. There was a signal."

"A ... signal..."

"From *Theseus*. Maybe."

The flock slows, as though the very air is turning to treacle. It locks into freeze-frame. The Colonel counts off seven seconds in which there is no motion at all.

Helen coalesces. Abstraction congeals towards humanity: ten thousand fragments fall together, an interlocking three-dimensional puzzle whose pieces desaturate from bright primary down to muted tones of flesh and blood. The Colonel imagines a ghost, dressing in formal attire for some special occasion.

"S—Siri?" She has a face now. The particles of its lower half jostle in time to the name. "Is he—"

"I don't know. The signal's—very faint. Garbled."

"He'd be forty-two," she says after a moment.

"He is," the Colonel says, not giving a micron.

"You sent him out there."

It's true enough; he didn't speak out, after all. He didn't object, even added his own voice to the chorus when it became obvious which way the wind was blowing. What weight would his protests have carried anyway? All the others were already on board, in thrall to a networked mob so far beyond caveman mentality that all those experts and officers might as well have been a parliament of mice.

"We sent *all* of them, Helen. Because they were all the most qualified."

"And have you forgotten *why* he was most qualified?"

He wishes he could.

"You sent him into space chasing ghosts," she says. "At best. At worst you fed him to monsters."

And you, he does not reply, *abandoned him for this place before the monsters even showed up.*

"You sent him up against something that was too big for *anyone* to handle."

I will not be drawn into this argument again. "We didn't know how big it was. We didn't know anything. We had to find out."

"And you've done a fine job on that score." Helen's fully integrated now, all that simmering resentment resurrected as though it had never been laid to rest at all.

"Helen, we were *surveyed*. The whole damn planet." Surely she remembers. Surely she hasn't got so wrapped up in her fantasy world that she's forgotten what happened in the real one. "Should we just have just ignored that? You think anyone else would miss their child less, even if Siri *wasn't* the best man for the job? It was bigger than him. It was bigger than all of us."

"Oh, you don't have to tell me. For Colonel Moore so loved the fucking world that he gave his only begotten son."

His shoulders rise, and fall.

"If this pans out—"

"If—"

He cuts her off: "Siri could be *alive*, Helen. Can't you put aside your hatred long enough to take any hope at all from that?"

She hovers before him like an avenging angel, but her sword arm is

stayed for the moment. She's beautiful—more so than she ever was in the flesh—although the Colonel has a pretty good idea of what her physical corpus must look like, after so many years spent pickling in the catacombs. He tries to squeeze a little vindictive satisfaction from that knowledge, and fails.

"Thank you for telling me," she says at last.

"Nothing's certain—"

"But there's a chance. Yes, of course." She leans forward. "Do you expect—that is, when will you have a better idea of what it says? The signal?"

"I don't know. I'm— pursuing options. I'll tell you the moment I learn anything."

"Thank you," the angel says, already beginning to dissipate—then recondenses at a sudden thought. "Of course you won't let me share this, will you?"

"Helen, you *know*—"

"You've already security-locked my domain. The wall goes up the moment I try to tell anyone my son could be alive. Doesn't it?"

He sighs. "It's not my call."

"It's an intrusion. That's what it is. It's a form of bullying."

"Would you rather I just didn't tell you?" But he knows, as Helen disconnects and Heaven dissolves and the barren walls of his apartment reappear around him, that it's all just part of the dance. The steps never change: he mans the barricades, she rages against them, energy flows downhill to the same empty equilibrium. It probably doesn't even matter whether the security locks are in place or not. Who would she tell, after all?

Down in Heaven, all her friends are imaginary.

* * *

"This is Jim Moore."

The Colonel stands at the edge of the desert. The Nissan idles at his side like a faithful pet.

"I will be unavailable for the foreseeable future. I can't tell you where I'm going."

He's been effectively naked for the past twenty-four hours: no springsoles, no sidearm, no dog tags. No watch: window to the Noosphere, keeper of secrets, hub and booster and event coordinator for all those everyday pieces of smartwear he left behind. He's even shut down his cortical inlays, thrown away his vision along with his garments. All that's

left is this last-minute voicemail, to be held in abeyance until he is beyond reach.

“I hope to provide a full debriefing upon my return. I don’t know exactly when that might be.”

He stands there, weighing costs, weighing risks. The threat of greater gods, the hazards of beatific indifference. The threat posed by aliens from another world; the threat posed by aliens from this one. The delusional arrogance in the thought that some puny caveman, scarcely climbed down from the trees, might be able to use one against the other.

The cost of a son.

“I believe that my service record has earned me some leeway. I’m asking you to refrain from investigating my whereabouts during my absence.”

He’s not trusting them to do that, though. The Nissan is stolen, logs doctored, all traces of truancy erased. His own vehicle tours the Olympic Peninsula on its own recognizance, laying a trail of bread crumbs for any forensic algos that happen by after the fact.

“I’m—aware of the breach this represents. You know I’d never do such a thing unless I thought it absolutely vital.”

Maybe you really do feel safe, sleeping with your giants. They haven’t rolled over and crushed you in your sleep; maybe you think that’s some kind of guarantee they never will. I will never be that reckless.

Again.

It doesn’t take a hive to grasp the simple, straightforward ease with which he’s been manipulated. It’s caveman strategy: find the Achilles heel, craft the exploit, slide it home. Forge hope from static. Let remorse and the faint hope of redemption do the rest.

All too easy to dismiss, if not for one thing: the sheer, mind-boggling egotism it would take to believe that a lonely old baseline could possibly matter to a collective of such godlike intellect. The thought that this unremarkable caveman would even merit *notice*, much less manipulation.

“I’ve set my apartment to run in autonomous mode for the duration of my absence. I would nonetheless appreciate it if someone could drop by occasionally to check in on my cat.”

He has to admit, in the face of all his fear and mistrust: compassion, after all, might be the most parsimonious explanation.

He thumbs SEND, lets the transmitter slip from his fingers. His valediction has travelled a thousand kilometers by the time his boot grinds

the little device into the dirt; it will reveal itself to the chain of command in due course. The Colonel leaves behind everything but the clothes on his back, two broad-spectrum antivenom capsules, and enough rations for a one-way hike to the monastery. If Bicameral thought processes are rooted in any kind of religious philosophy, hopefully it will be one of those faiths that preach charity to lost souls, and the forgiveness of trespass.

No guarantees, of course. There are so many ways to read the sliver of intelligence the hive has granted him. Perhaps he's merely a pawn in some greater game after all; or a starving insect who once seized a crumb from the Heavens, and now presumes to think it has a relationship with God. Only one thing is certain out of all the scenarios, all the competing hypotheses. One insight, after all these years, that leaves the Colonel so hungry for more he'll risk everything: His son was lost, but now is found.

His son is coming home.

"Go home," he tells the Nissan, and sets out across the desert.



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